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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,940	06/21/2001	Hyoung June Kim	B-4227 618899-5	4874

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LADAS & PARRY
Suite 2100
5670 Wilshire Boulevard
Los Angeles, CA 90036-5679

EXAMINER

VAN, QUANG T

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 08/15/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,940

Applicant(s)

KIM, HYOUNG JUNE

Examiner

Quang T Van

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election with traverse of Species I (Figure 1) claims 1-9 are read on, in Paper No. 6 is acknowledged. The traversal is on the ground(s) that "even though it may include claims to independent or distinct inventions, as long as the search and examination of the entire application can be made without serious burden on the examiner". This is not found persuasive. The applicant is referred to MPEP 809.02 (a), which states the requirements for an election of species requirement. Note especially section (B) which states that "the species are preferably identified as the species of figures 1, 2, and 3" and that the distinguishing characteristics of the species should be states only "in the absence of distinct figures of examples".

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "320" recited on figure 3 is not show in specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in

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the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because it should avoid using phrases which can be implied, such as, "the invention relates to" etc. Correction is required. See MPEP § 608.01(b).

Claim Objections

4. Claims 1-9 are objected to because of the following informalities: the term "semiconductor films" and "non-conducting substrates" have typo errors and should be changed to "semiconductor film" and "non-conducting substrate". Correction is required.

NOTE: Since the applicant elected Species I (Figure 1, claims 1-9), Figure 1 only shows a single semiconductor film and a single non-conductor substrate. Further, there is also no disclose in specification that figure 1 includes a plurality of semiconductor film or a plurality of non-conductor substrate. If applicant is intended to claim "semiconductor films" and "non-conducting substrates"; the support description should be added to specification and a new drawing should be added to show "semiconductor films" and "non-conducting substrates" in Species I.

For purpose of examination, it is presumed a single semiconductor film and a single non-conductor substrate.

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Claim 7 is also objected to because "the glass substrate" recited in line 2 has no antecedent basis and should be changed to "a glass substrate" for appositive recitation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashtiani (US 5,669,975) in view of Sasaki et al (US 5,970,368). Ashtiani discloses an apparatus for processing at least a surface of an article with uniform plasma comprising installing induction coil (30) in close proximity to semiconductor film on substrate (62) lying on a susceptor (68), wherein the winding configuration of said induction coil (30) is set in such a way that the current direction of the inductor is aligned parallel to the in-plane direction of said semiconductor film. However, Ashtiani does not disclose the substrate being a non-conducting substrate. Sasaki discloses a method for manufacturing polycrystal semiconductor film having a substrate being a non-conducting substrate (col. 1, lines 13-16). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Ashtiani a substrate being a non-conducting substrate as taught by Sasaki in order to prevent the substrate from being heated under alternating magnetic field.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daviet (US 6,056,848) in view of Suzuki et al (US 5,578,521). Daviet discloses a

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plasma reactor and methods for processing semiconductor substrate comprising installing induction coil (106) in close proximity to semiconductor film on substrate (104) lying on a susceptor (118), wherein the winding configuration of said induction coil (106) is set in such a way that the current direction of the inductor is aligned parallel to the in-plane direction of said semiconductor film. However, Daviet does not disclose the substrate being a non-conducting substrate. Suzuki discloses a non-conductive substrate (12) is placed on quartz tray (13) and the quartz tray is supported on graphite susceptor (14). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Daviet a substrate being a non-conducting substrate as taught by Suzuki in order to prevent the substrate from being heated under alternating magnetic field.

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashtiani (US 5,669,975) in view of Sasaki et al (US 5,970,368), and further in view of Arima et al (US 4,926,793). Ashtiani/Sasaki disclose substantially all features of the claimed invention except a susceptor is made of an electrically non-conductive material. Arima discloses a susceptor (21) is made of an electrically non-conductive material (col. 10, lines 13-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Ashtiani/Sasaki a susceptor is made of an electrically non-conductive material as taught by Arima in order to prevent the susceptor from being heated under the alternating magnetic field.

9. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daviet (US 6,056,848) in view of Suzuki et al (US 5,578,521), and further in view of

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Arima et al (US 4,926,793). Daviet/Suzuki disclose substantially all features of the claimed invention except a susceptor is made of an electrically non-conductive material. Arima discloses a susceptor (21) is made of an electrically non-conductive material (col. 10, lines 13-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Daviet/Suzuki a susceptor is made of an electrically non-conductive material as taught by Arima in order to prevent the susceptor from being heated under the alternating magnetic field.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sang Paik can be reached on 703-308-1147. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.



QV
August 11, 2003



QUANG T. VAN
PATENT EXAMINER